

Date: Monday, 8/21/2006 2:13:03 PM  
User: Kim Johnston

# Process Sheet

Customer : CU-DAR001 Dart Helicopters Services  
Job Number : 28267 -1  
Estimate Number : 10396  
P.O. Number : N/A  
This Issue : 8/21/2006 S.O. No. : N/A  
Prsht Rev. : NC  
First Issue : N/A Type : MACHINED PARTS  
Previous Run : 27924  
Written By :  
Checked & Approved By :  
Comment : Est:C 03.04.11 Reformat; Incorporated D2968-1/-5 KJ/RF

Drawing Name : TOW RING  
Part Number : D2968041  
Drawing Number : D2968  
Project Number : N/A  
Drawing Revision : B1  
Material : SIA  
Due Date : 9/20/2006 Qty: 40 Um: Each

## Additional Product

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 28267A STEM



Comment: Sub-Component STEM  
D2968-1 B 28267A

AS 08/09/19 (40)

2.0 28267B RING



Comment: Sub-Component RING  
D2968-5 B 27924B

AS 06/09/19 (40)

3.0 LARGE FAB 1 LARGE FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1  
Weld D2968-1 & D2968-5 as per Dwg D2968 & QSI 004 using 4130 welding rod Identify as D2968-041  
Batch: M15684

AS 06/09/19 (40)

4.0 QC5/9 WELD INSPECTION



Comment: WELD INSPECTION

PD 06-09-19 (40)

5.0 PG PURCHASING



Comment: PURCHASING  
Issue P/O: 2089 C206109/20 (40)  
Description: D2968-041 to heat treat to ultimate tensile strength  
125ksi as per Dwg D2968  
Conformity sheet required

Issue P/O: 2090 C206109/20 (40)  
Cad Plate per QQ-P-416F Class I Type II

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Mfg / Design Mgr	Approval QC Inspector

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Design Mgr	Approval QC Inspector
			Initial Design Mgr	Action Description Design Mgr	Sign & Date			

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes ☒ No ☐ DQA:   D   Date: 06/10/13

NOTE: Date & initial all entries

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Date: Monday, 8/21/2006 2:13:03 PM  
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## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: TOW RING

Job Number: 28267

Part Number: D2968041

Job Number:



Seq. #:

Machine Or Operation:

Description :

Conformity sheet required

6.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Receive & Inspect For Transit Damage

Ensure certificate of conformity is attached

2/30/10/17 (40) 36

7.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT CAD PLATE

2/26/10/20

2/30/10/17

(870)

8.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat White Gloss (Ref: 4.3.5.2) as per QSI 005 4.3

\*\*\*DO NOT POWDER COAT THREADS\*\*\*

FC 06 10 27

(40) 36

9.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT

2/4/10/31

(40) 36

10.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: ST113

2/4/10/31

40 36

11.0

DC

DOCUMENT CONTROL



Comment: DOCUMENT CONTROL

Inspection Level 21


2/4/10/31 36

Job Completion



2/26/10/31



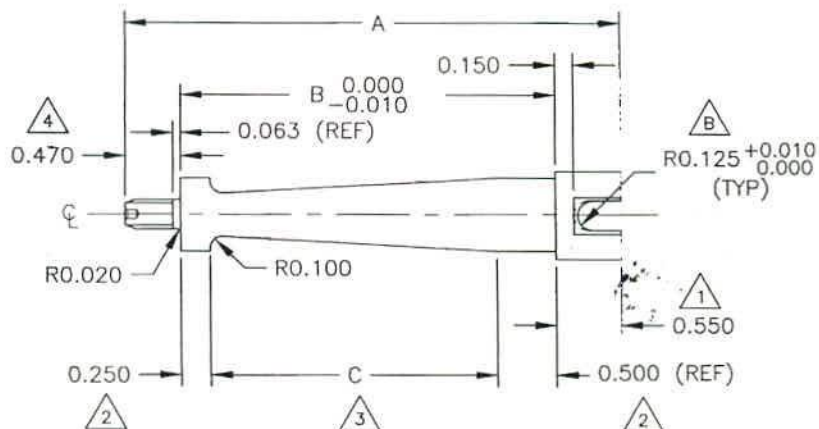
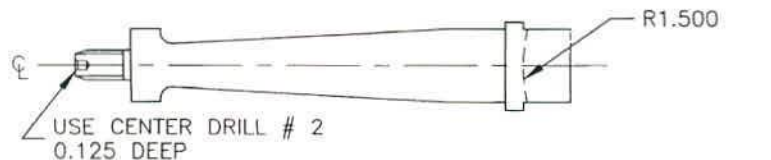
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Mfg / Design Mgr	Approval QC Inspector
06-10-18	7.0	QCS required. Perm. Change					 06-10-18

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Design Mgr	Approval QC Inspector
			Initial Design Mgr	Action Description Design Mgr	Sign & Date			

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

NOTE: Date & initial all entries

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_



PART NUMBER	A	B	C
D2968-1	5.040	4.020	3.270
D2968-3	4.200	3.180	2.430

D2968-1/-3 STEM

D2968-1 AND D2968-3 STEM:

MATERIAL: AISI 4130

△ 0.750 O.D.

△ 0.625 O.D.

△ MACHINE UNIFORM TAPER FROM 0.363 O.D. TO 0.625 O.D.

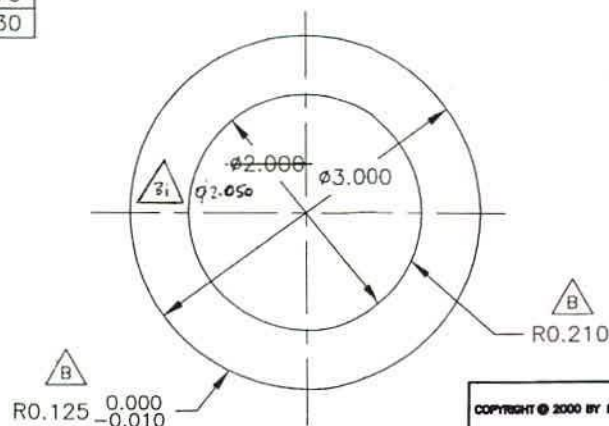
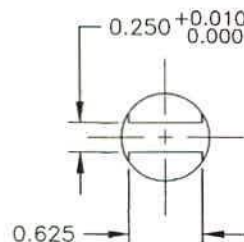
△ 1/4-28 UNF THREAD WITH 0.063 GRIP MACHINE ALL INSIDE EDGES WITH A 0.010 RADIUS UNLESS OTHERWISE INDICATED

TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

D2968-5 RING:

MATERIAL AISI 4130

TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

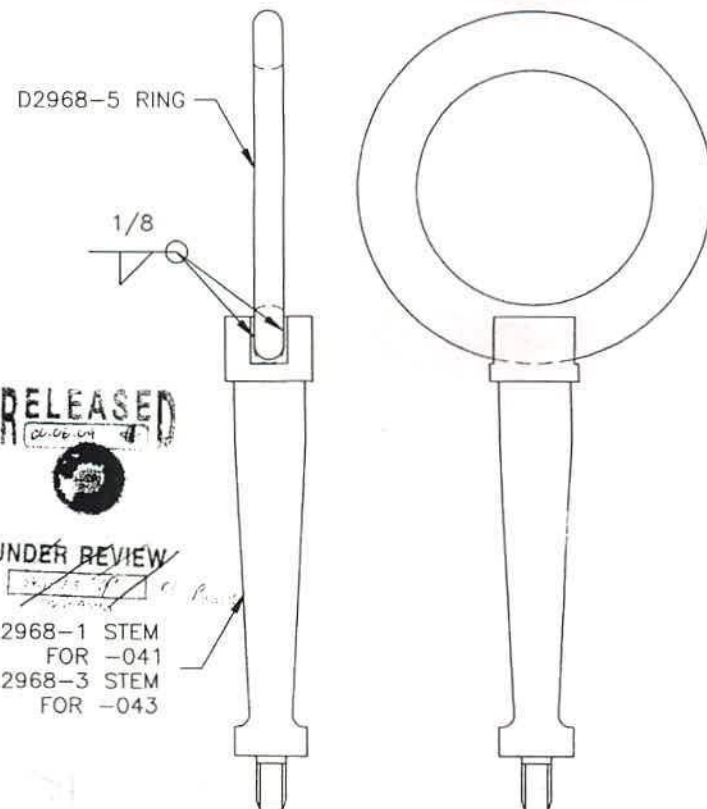


D2968-5 RING

RELEASED

UNDER REVIEW

USE 2968-1 STEM FOR -041  
USE 2968-3 STEM FOR -043



D2968-041 AND D2968-043 TOW RING:

WELD PER QSI 004 ON ALL EDGES BETWEEN STEM AND RING  
HEAT TREAT TO MIN ULTIMATE TENSILE STRENGTH OF 125 KSI  
FINISH: CAD PLATE ENTIRE ASSEMBLY PER

QQ-P-416F CLASS I TYPE II

POWDER COAT WHITE (REF 4.3.5.2) PER DART

QSI 005 4.3 (EXCEPT THREADS)

TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

B	00.05.31	R0.125 AND R0.210 WERE 0.060 x 45°
A	00.03.07	NEW ISSUE
DESIGN	BY	<b>DART</b> DART AEROSPACE LTD. WARRICKSURY, OXFORD, CANADA
CHECKED	APPROVED	DRAWING NO. D2968 REV. 3B SHEET 1 OF 1
DATE	00.05.31	TITLE TOW RING SCALE 1:1

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WORK ORDER NO. 28267  
 UNCONTROLLED  
 SUBJECT TO AMENDMENT  
 WITHOUT NOTICE  
 RETURN TO SHOP COPY  
 ENGINEERING

**MANCO**  
**DOMPLEX**

8895 Crescent 3  
Anjou (Québec) H1J 1B6  
Tél.: 514-355-7867  
Fax: 514-355-8750

**CERTIFICAT DE CONFORMITÉ**  
**CERTIFICATE OF COMPLIANCE**

# 9207

Dant Aerospace LTD  
Client / Customer

D2968-041  
# de la pièce / part #

PO2090  
Votre # de commande / Your purchase order #

101082  
Notre # de bon de livraison / Our packing slip #

Inspecteur / Inspector <u>Renault</u>	Date, équipe / Date, shift <u>10 OCT 2006</u>
Placage / Plating <u>QAD 416 F CLASS 1 TYPE II</u>	
Quantité totale / Total quantity <u>40</u>	Quantité inspectée / Inspected quantity <u>40</u>
Adhésion / Adhesion <u>bonne</u>	
Épaisseur / Thickness L.C.D. H.C.D. Moy. / aver. <u>0.0005</u>	
Coulisses, taches / Leach, spots <u>Non</u>	Rugosité / Roughness <u>Non</u>
Quantité approuvée / Approved quantity <u>40</u>	Quantité rejetée / Rejected quantity <u>          </u>

Commentaires / Comments

Noûs certifions que les pièces énumérées ci-dessus ont été faites en conformité avec vos dessins et spécifications et rencontrent les exigences contenues dans ces dessins et/ou spécifications.

We hereby certify that the parts listed above have been made in accordance with your drawings and specifications and are correct to the requirements contained in those drawings and/or specifications.

Signé au nom de  
Signed on behalf of

**MANCO**  
**DOMPLEX**




**VAC AERO**  
INTERNATIONAL INC.

## RELEASE NOTE

GST No.: R105468102

OAK 79593-1

☒ HEAD OFFICE  
1371 ~~Steeles~~ ROAD, OAKVILLE, ONTARIO  
CANADA L6L 2X5  
TEL: (905) 827-4171 FAX: (905) 827-7489

☐ 2009 WYECROFT ROAD, UNIT B  
OAKVILLE, ONTARIO  
CANADA L6L 6J4  
TEL: (905) 827-7377 FAX: (905) 827-1380

☐ QUEBEC DIVISION  
7450 RUE VERITE STREET, ST. LAURENT, QUEBEC  
CANADA H4S 1C5  
TEL: (514) 334-4240 FAX: (514) 334-6269

10/02/2006

MM / DD / YYYY

PAGE: 1

BILL TO: 1DAR01  
DART AEROSPACE LTD.  
1270 ABERDEEN ST.  
HAWKESBURY, ON

SHIP TO: MANCO DOMPLEX  
4660 HICKMORE  
ST. LAURENT, QUEBEC

K6A 1K7

H4T 1K7

DATE SHIPPED	SHIP VIA	F.O.B.
10/02/2006	PUROLATOR 7684382	ORIGIN
CUSTOMER P/O No.	JOB No.	TERMS
PO00002089		COD

PART No.	DESCRIPTION	UOM	QTY ORD	QTY SHPD	TEST RESULTS
D2968-041	TOW RING	EA	40	40	
<p>Process Specifications: Procedure: 4047 HEAT TREATED TO 125 KSI MIN. ✓ HRC 27-32.5 MATERIAL: 4130</p> <p>B28267</p>					
<div style="border: 1px solid black; padding: 5px; display: inline-block;"> <b>100% HARDNESS TESTED</b>  40 RS.  31/32 HRC  VALO. TH. 25 Q.C. </div>					

I hereby certify that the material covered by this release note has been inspected and tested and conforms to all specifications relevant thereto in accordance with the conditions of the contract / or purchase order.

ON BEHALF OF VAC AERO INTERNATIONAL INC.

*Diana Freeman*  
Authorized Q.C. Inspector



VACUUM BRAZING · HEAT TREATING · SPECIAL PROCESSING · FURNACE EQUIPMENT  
TURBINE COMPONENT OVERHAUL · PLASMA AND OTHER COATINGS

HEAT  
TREATING

